



Conners' Continuous Performance Test II (CPT II V.5)

By C. Keith Conners, Ph.D. and MHS Staff

Profile Report

Client Name: Jane Sample

Age: 10
Gender: Female
Education: n/a
Grade: n/a
Administration Date: May 11, 2004
School/Facility: n/a
Current Medication: n/a

This report is intended to be used by the test administrator as an interpretive aid. This report should not be used as the sole basis for clinical diagnosis or intervention.



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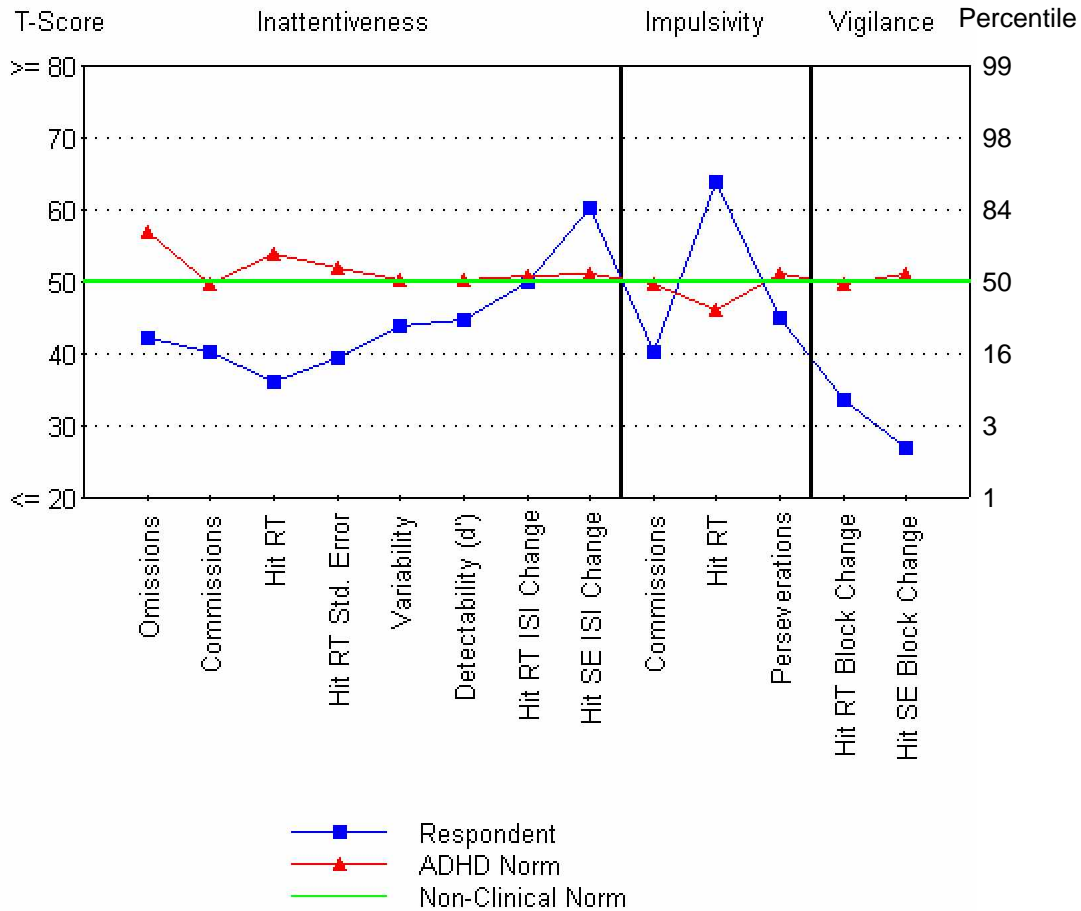
Introduction

The Conners' Continuous Performance Test II (CPT II) is a valuable assessment tool that can reveal important information about an individual's functioning. The instrument is helpful when a diagnosis of ADHD is being considered.

This report provides information about Jane's CPT II scores, what scales and indexes are elevated and how she compares to the normative group. The non-clinical sample includes 1,920 individuals from the general population. The clinical norm groups include 378 cases with ADHD, and 223 neurologically-impaired adults. For further information refer to the CPT II Technical Guide and Software Manual published by MHS.

Respondent Profile Contrasted Against Non-Clinical and ADHD Norms

The following graph compares Jane's T-scores against Non-Clinical and ADHD norms.

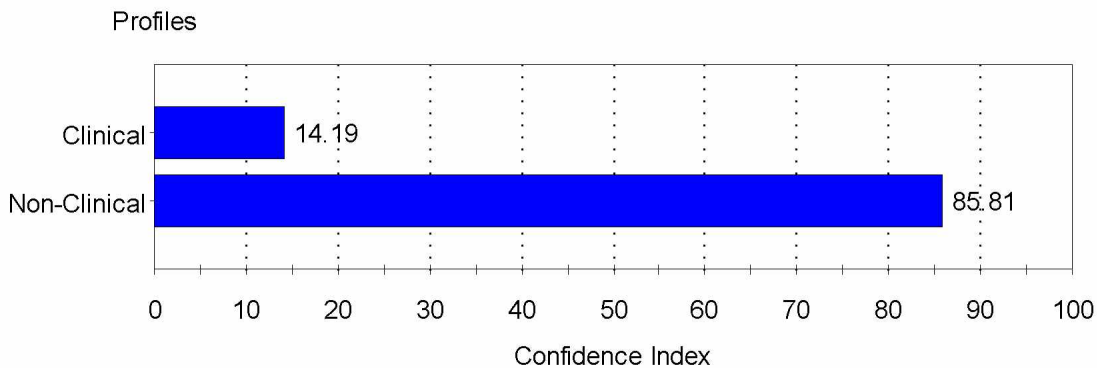


Note: Hit RT is scaled such that for

1. Inattentiveness - slow reaction times produce high T-scores.
2. Impulsivity - fast reaction times produce high T-scores.

Confidence Index Associated with ADHD Assessment

The following graph shows Jane's Confidence Index for the clinical and non-clinical profiles.



Non-clinical, 85.81% Confidence

The CPT discriminant function indicates that the results better match a non-clinical than clinical profile. The Confidence Index computed can be readily described in the following way: The chances are 85.81 out of 100 that no significant attention problem exists.

The Confidence Index should always be reviewed in relation to results on the remaining CPT II measures. When the Confidence Index falls close to 50 (providing no decision), however, there is a heightened need to examine all individual index and measure scores, and to consider the inter-relationships between them.

Summary of Overall Measures (general population norms used)

The following table summarizes Jane's overall measures and gives general information about how she compares to the normative group.

Measure	Value	T-Score	Percentile	Guideline
Omissions %	1 0.31	42.23	21.89	good performance
Commissions %	14 38.89	40.28	16.57	good performance
Hit RT	344.93	36.01	8.09	a little fast
Hit RT Std. Error	5.73	39.45	14.60	good performance
Variability	10.90	43.96	30.70	good performance
Detectability (d')	0.61	44.68	33.29	good performance
Response Style (β)	0.23	42.64	26.25	mildly atypical
Perseverations %	0 0.00	44.98	34.39	good performance
Hit RT Block Change	-0.03	33.57	6.16	very good performance
Hit SE Block Change	-0.15	26.89	1.36	very good performance
Hit RT ISI Change	0.08	49.91	53.63	within average range
Hit SE ISI Change	0.30	60.37	84.97	MILDLY ATYPICAL

Summary of Inattention Measures (general population norms used)

The following table summarizes Jane's inattention measures and gives general information about how she compares to the normative group.

Measure	Value	T-Score	Percentile	Guideline
Omissions %	1 0.31	42.23	21.89	OK
Commissions %	14 38.89	40.28	16.57	OK
Hit RT	344.93	36.01	8.09	OK
Hit RT Std. Error	5.73	39.45	14.60	OK
Variability	10.90	43.96	30.70	OK
Detectability (d')	0.61	44.68	33.29	OK
Hit RT ISI Change	0.08	49.91	53.63	OK
Hit SE ISI Change	0.30	60.37	84.97	Inattention

Summary of Impulsivity Measures

(general population norms used)

The following table summarizes Jane's impulsivity measures and gives general information about how she compares to the normative group.

Measure	Value	T-Score	Percentile	Guideline
Commissions %	14 38.89	40.28	16.57	OK
Hit RT	344.93	36.01	8.09	Fast
Perseverations %	0 0.00	44.98	34.39	OK

Summary of Vigilance Measures

(general population norms used)

The following table summarizes Jane's vigilance measures and gives general information about how she compares to the normative group.

Measure	Value	T-Score	Percentile	Guideline
Hit RT Block Change	-0.03	33.57	6.16	OK
Hit SE Block Change	-0.15	26.89	1.36	OK

About the Summary Measures

Conversions were made for d' so that high T-scores (i.e., ≥ 60) indicate poor performance for ALL measures listed in the table.

For B, both high AND low scores are noteworthy, indicating unusual response styles.

Likewise, both high and low Hit RT T-scores can be significant. Low T-scores (unusually fast RTs) may be associated with impulsivity, and high T-scores (unusually slow RTs) may indicate inattentiveness.

In general, the more measures that are atypical, the more likely that a problem exists. The presence of only one atypical measure does not usually indicate a problem.

Interpretive Guide

The CPT II provides a rich source of information. The report includes four sections. The first section checks the validity of the administration. The second section defines the measures and summarizes the respondent's performance on each measure. The third section synthesizes the information from the measures into a performance profile and provides substantive analysis. The fourth section uses discriminant analyses to provide an overall assessment, which is summarized briefly in the QuickView section presented next.

QuickView

Respondent: Jane Sample

Confidence Index Assessment (ADHD): Non-clinical, Confidence Index = 14.19% (i.e., 85.81% confidence of non-clinical classification)

Non-clinical for Attention Deficit, Confidence Index = 14.19% (i.e., 85.81% confidence of non-clinical classification). The CPT discriminant function indicates that the results better match a non-clinical than an ADHD clinical profile. The Confidence Index can be described in the following way. The chances are 85.81 out of 100 that no clinical attention problem exists.

In addition to the Confidence Index, the scores for all of the other specific measures must be considered when interpreting the results.

Validity of Administration

The CPT II performs a self-diagnostic check of the accuracy of the timing of each CPT administration. There was no indication of any timing difficulties or respondent non-compliance, and the current administration should be considered valid.

Definitions and Summary of Measures

This section defines each measure, and provides a brief statement regarding the respondent's performance with respect to each of these measures. Substantive interpretation is then provided in subsequent sections.

Omissions

Omissions result from the failure to respond to target letters (i.e., non-Xs)

Jane made fewer omission errors than the average of the normative group.

Commissions

Commission errors are made when responses are given to non-targets (i.e., Xs).

Jane made few commission errors. The percentage of commission errors is lower than the average of the normative group.

Hit Reaction Time - Overall (Hit RT)

Overall Hit Reaction Time is the average speed of correct responses for the entire test.

Jane's Overall Mean Reaction Time was fast in comparison to the normative group average.

Standard Error - Overall (Hit RT Std Error)

Standard Error is a measure of response speed consistency. The higher the Overall Standard Error, the greater the inconsistency in the response speed.

Jane's reaction times were less variable than the normative group average. Reaction times were highly consistent.

Variability of Standard Error

Like Overall Standard Error, the Variability of Standard Error is a measure of response speed consistency. However, Variability of Standard Error measures "within respondent" variability. That is, the amount of variability the individual shows in 18 separate segments of the test in relation to his or her own overall standard error. Although Variability of Standard Error is a different measure than Overall Standard Error, typically the two measures produce comparable results. The higher the Variability of Standard Error, the greater the inconsistency in the response speed.

The Variability of Standard Error for Jane was lower than the normative group average.

Detectability (d')

The value d' is a measure of the difference between the signal (non-X) and noise (X) distributions. As such d' provides a means for assessing an individual's discriminative power since, in general, the greater the difference between the signal and noise distributions, the better the ability to distinguish and detect X and non-X stimuli.

Jane had a relatively low T-score for d-prime indicating better than average detectability.

Response Style Indicator (β)

Beta (β) represents an individual's response tendency: Some individuals are cautious and choose not to respond very often. Conceptually, such individuals want to make sure they are correct when they give a response. Higher values of Beta reflect this response style. The emphasis is on avoiding commission errors. Other individuals respond more freely to make sure they respond to most or all targets, and they tend to be less concerned about mistakenly responding to a non-target. Lower values of Beta are produced by this response style.

The obtained value of Beta is lower than the average of the normative group. Jane's response style was somewhat different than that of a typical respondent from the norm group.

Perseverations

Any reaction time that is less than 100 ms constitutes a perseverative response. Given normal expectations of physiological ability to respond, such responses are usually either slow responses to a preceding stimuli, a random response, an anticipatory response, or a response repeated without consideration of the stimuli or task requirements.

The percentage of perseverations was lower than the average of the normative group.

Hit Reaction Time by Block (Hit RT Block Change)

Hit RT Block Change measures change in reaction time across the duration of the test. High values of Hit RT Block Change indicate a substantial slowing in reaction times. Low values indicate that responses got quicker as the test progressed.

The low T-score on this measure indicates that Jane did an exceptionally good job of sustaining her reaction time over the duration of the test.

Standard Error by Block (Hit SE Block Change)

Standard Error by Block detects changes in response consistency over the duration of the test. High values of Hit SE Block Change indicate a substantial loss of consistency as the test progressed. Low values on this measure indicate sustained or improved response consistency.

The low T-score on this measure indicates that Jane became more consistent in reaction time as the test progressed.

Reaction Time by Inter-Stimulus Interval (Hit RT ISI Change)

This measure examines change in average reaction times at the different Inter-Stimulus Intervals (i.e., when the letters are presented at 1, 2, or 4 sec. intervals).

The obtained value of Hit RT ISI Change is within the average range of the normative group indicating typical changes in response speeds across the different Inter-Stimulus Interval levels.

Standard Error by Inter-Stimulus Interval (Hit SE ISI Change)

This measure examines change in the standard error of reaction times at the different Inter-Stimulus Intervals (i.e., when the letters are presented at 1, 2, or 4 sec. intervals).

The high T-score on this measure indicates that Jane showed less consistency in reaction times at the different Inter-Stimulus Intervals than was typical in the norm group. Sometimes, this finding relates to activation/arousal needs. Consider optimal stimulation levels in explaining performance.

Profile Analysis

This section integrates all of the CPT data obtained from the administration to provide clinically relevant interpretations of the results. The interpretations given in this section should be treated as hypotheses, and must be combined with other information about the respondent.

Jane's responses were very fast and she also made relatively few errors. Therefore, the fast speed probably represents fast processing ability.

* Jane's CPT performance was substantively affected by the Inter-Stimulus Interval. Specifically, responses became more erratic when the ISI was slowed from 1 second to 2 and 4 seconds. The difficulty making the necessary adjustment to the change in tempo of stimulus presentation may reflect limitations in the ability to adjust to changes in task demands.

In addition, each score can also be considered separately concentrating on T-scores above 60 (if there are any). High scores in Omissions, Commissions, and Overall Hit Reaction Time pertain to inattentiveness. High scores on Overall Standard Error and Variability relate to response consistency and "erraticness." A high T-score for d' is commonly associated with poor perceptual power for this task and a below average ability to discriminate targets from non-targets. High scores on either Hit RT ISI Change or Hit SE ISI Change tend to indicate a difficulty to adjust to changing task demands. High commission T-scores can be the result of inattentiveness, but when coupled with average or faster than average reaction times (e.g., Overall Hit RT T-score of 50 or less), it also can be due to impulsivity. High scores on either Hit RT Block Change or Hit SE Block Change result from a decline in performance as the test progressed, and high scores on these measures may relate to vigilance deficits.

Overall Assessment

This section looks at the Confidence Index and the number of elevated measures to provide an overall assessment of performance on the CPT.

ADHD Assessment: CPT Performance Good; No indication of attention problems.

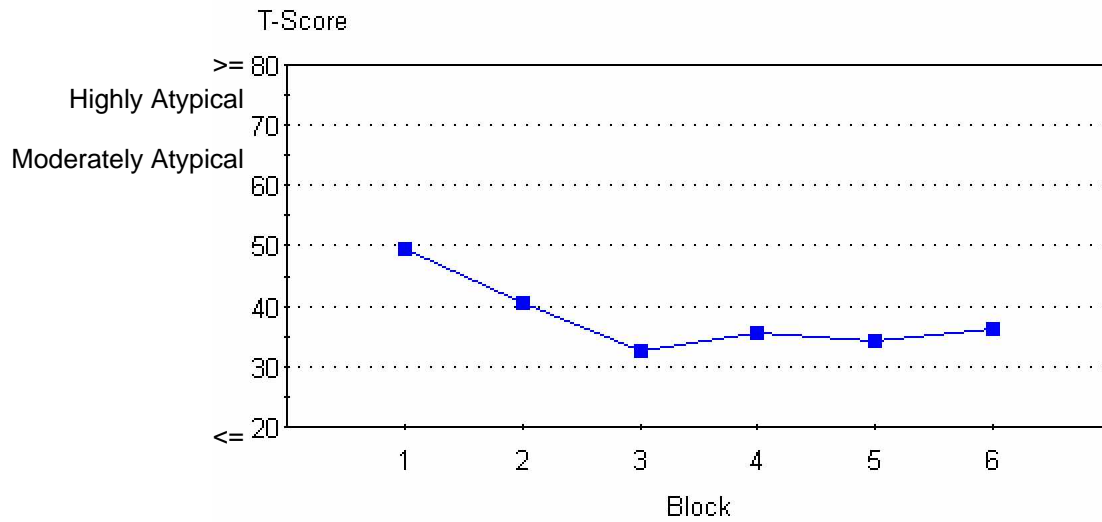
The ADHD Confidence Index suggests non-clinical classification, and few or none of the measures were elevated significantly.

Important Additional Notations

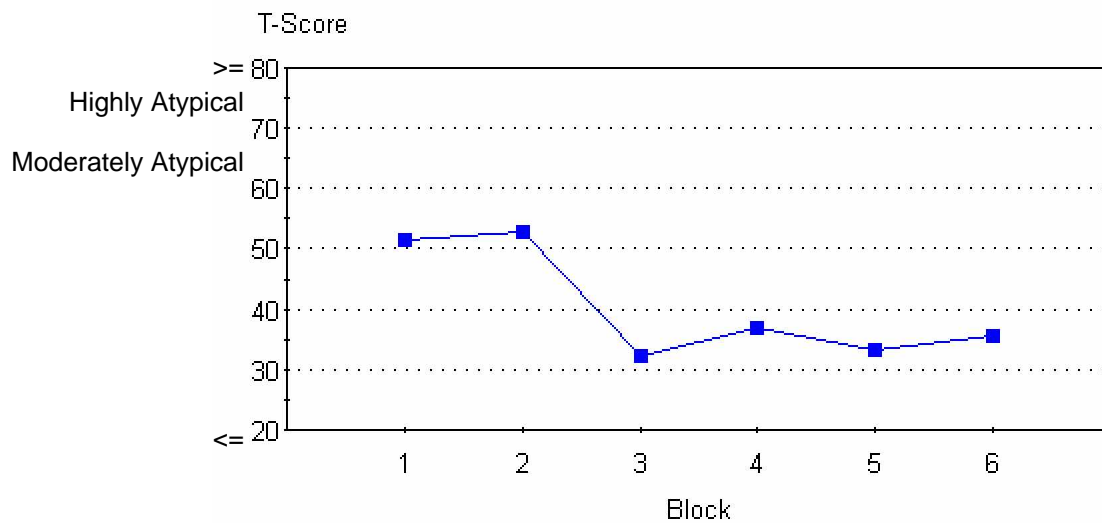
The comments in this report are based on general patterns apparent in Jane Sample's responses. Always examine the graphs and information provided carefully to refine (and add to) the interpretations given. For instance, you will want to consider the statistics that are not explicitly discussed in this printed report. Please consult the CPT II Technical Guide and Software Manual, or use the CPT II Help while examining "on screen" report for information about the statistics.

The comments made in this report should be used as an aid in the assessment process. Other sources of information (e.g., historical information, assessments, observations) should be used in conjunction with the information from the CPT II reports when assessing an individual. The information contained in this report should be treated as confidential.

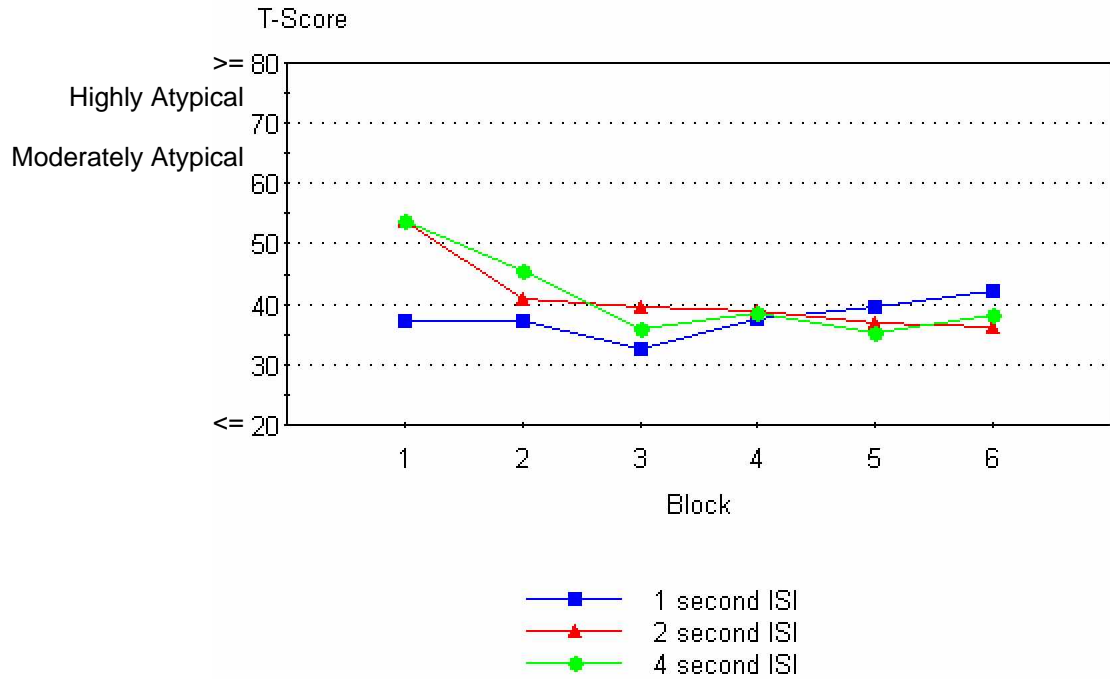
Mean Hit Reaction Times - ISI Collapsed (general population norms used)



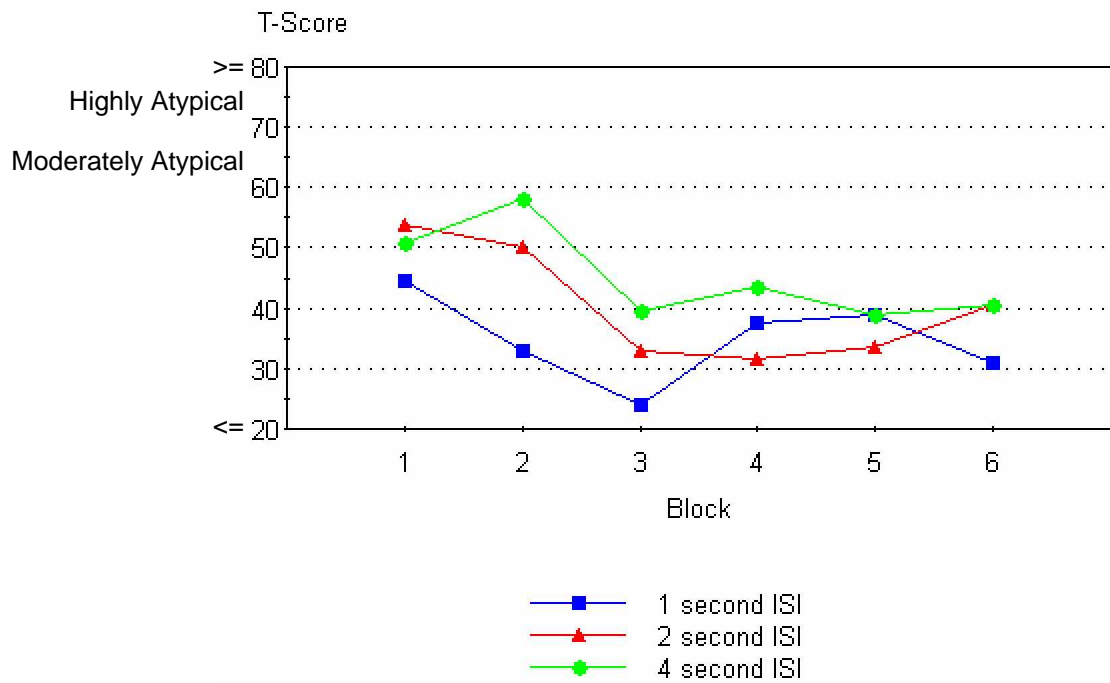
Hit Standard Errors - ISI Collapsed (general population norms used)



Mean Hit Reaction Times - ISI Expanded (general population norms used)



Hit Standard Errors - ISI Expanded (general population norms used)



Block Data (ISI Collapsed)

Measure	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6
Trials	59	60	60	60	60	60
Targets %	53 90.00	54 90.00	54 90.00	54 90.00	54 90.00	54 90.00
Hits %	53 100.00	54 100.00	54 100.00	54 100.00	54 100.00	53 98.00
Omissions %	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	1 2.00
Non-Targets %	6 10.00	6 10.00	6 10.00	6 10.00	6 10.00	6 10.00
Rejections %	4 67.00	4 67.00	3 50.00	3 50.00	4 67.00	4 67.00
Commissions %	2 33.00	2 33.00	3 50.00	3 50.00	2 33.00	2 33.00
Overall RT (ms)	389	367	319	331	328	332
Hit RT (ms)	393	362	319	333	328	334
Commission RT (ms)	291	504	316	292	302	268
Hit RT Std. Error (ms)	17.52	21.72	7.56	10.37	8.43	9.99

Block Data (1 Second ISI)

Measure	Block 1	Block 6	Block 9	Block 10	Block 14	Block 17	Overall
Trials	19	20	20	20	20	20	119
Targets	17	18	18	18	18	18	107
%	89.00	90.00	90.00	90.00	90.00	90.00	90.00
Hits	17	18	18	18	18	17	106
%	100.00	100.00	100.00	100.00	100.00	94.00	99.00
Omissions	0	0	0	0	0	1	1
%	0.00	0.00	0.00	0.00	0.00	6.00	1.00
Non-Targets	2	2	2	2	2	2	12
%	11.00	10.00	10.00	10.00	10.00	10.00	10.00
Rejections	0	1	1	1	2	1	6
%	0.00	50.00	50.00	50.00	100.00	50.00	50.00
Commissions	2	1	1	1	0	1	6
%	100.00	50.00	50.00	50.00	0.00	50.00	50.00
Overall RT (ms)	286	332	287	291	323	318	306
Hit RT (ms)	286	311	283	291	323	321	302
Commission RT (ms)	291	714	367	292	0	256	368
Hit RT Std. Error (ms)	15.29	11.52	7.89	12.34	15.64	9.85	5.30

Block Data (2 Second ISI)

Measure	Block 2	Block 4	Block 8	Block 12	Block 13	Block 18	Overall
Trials	20	20	20	20	20	20	120
Targets	18	18	18	18	18	18	108
%	90.00	90.00	90.00	90.00	90.00	90.00	90.00
Hits	18	18	18	18	18	18	108
%	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Omissions	0	0	0	0	0	0	0
%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-Targets	2	2	2	2	2	2	12
%	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Rejections	2	2	1	1	1	1	8
%	100.00	100.00	50.00	50.00	50.00	50.00	67.00
Commissions	0	0	1	1	1	1	4
%	0.00	0.00	50.00	50.00	50.00	50.00	33.00
Overall RT (ms)	405	351	330	335	320	310	341
Hit RT (ms)	405	351	332	338	322	312	343
Commission RT (ms)	0	0	294	279	291	279	286
Hit RT Std. Error (ms)	25.12	23.93	10.11	8.96	10.25	17.63	7.64

Block Data (4 Second ISI)

Measure	Block 3	Block 5	Block 7	Block 11	Block 15	Block 16	Overall
Trials	20	20	20	20	20	20	120
Targets	18	18	18	18	18	18	108
%	90.00	90.00	90.00	90.00	90.00	90.00	90.00
Hits	18	18	18	18	18	18	108
%	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Omissions	0	0	0	0	0	0	0
%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-Targets	2	2	2	2	2	2	12
%	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Rejections	2	1	1	1	1	2	8
%	100.00	50.00	50.00	50.00	50.00	100.00	67.00
Commissions	0	1	1	1	1	0	4
%	0.00	50.00	50.00	50.00	50.00	0.00	33.00
Overall RT (ms)	483	419	341	366	340	369	386
Hit RT (ms)	483	426	344	370	341	369	389
Commission RT (ms)	0	294	288	305	312	0	300
Hit RT Std. Error (ms)	27.45	56.25	15.33	23.63	16.64	19.11	13.13

Date Printed: Thursday, May 13, 2004

End of Report